Final Report

5.1-11

Agriculture Information System
Project P48 - HR

Conducted by
Cartel Electronics Inc.

Funded by the Agriculture Development Fund

FINAL REPORT - AGRICULTURE INFORMATION SYSTEM
PROJECT P48 - HR, CARTEL ELECTRONICS INC.

The field test portion of the Agriculture Information System - pilot project has been completed and, further to the previous progress reports filed with the committee members, the following is a final report of this A.D.F. project, as per paragraph 19 of the Agreement with Saskatchewan Department of Agriculture.

A. The pilot project of an electronic agriculture information network within the province has been a tremendous success.

The major problems faced by Cartel were as follows:

(a) To find a highly efficient method of economically distributing rapidly changing data to the rural community in a timely fashion.

(b) To analyze the areas where financial support could be expected to provide an ongoing information medium.

(c) To create a software design which would complement the diverse demands placed upon it by both extensive textual and graphic information.

(d) To distribute the elctronic data as efficiently as possible utilizing existing toll grade lines for transmission.

(e) To provide an interactive medium which could be easily understood and readily utilized by rural residents unfamiliar with computer technology.

The exposure of the rural population to interactive information terminals has met with very little user resistance. Generally the feelings regarding the system were positive. However, it became distinctly evident that the limited exposure of (8) terminals were insufficient to attract major advertising support and a much wider coverage of the province would be necessary before advertising funds become significant.

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As a service to the rural community, the system shows tremendous promise. High levels of support have been expressed by major banks and many towns and villages.

Respondents to surveys indicate a willingness to utilize the system particularly if more extensive, current data is provided. The network performed up to expectations and despite widespread locations the reliability of this method of information dispersal was good.

Conclusions reached by the management team:

(1) This system provides an excellent information service particularly for rural communities.

(2) Private sector will readily support the network with site locations, and if enough sites are established, with advertising revenues and/or sponsorship.

(3) Availability of the network within a community must be advertised to heighten awareness.

(4) This system has proven it will increase the farmer's awareness of the significant quantity of information and services available through the Department of Agriculture.

B. TECHNICAL REPORT AND STATISTICS

Attached hereto please find a copy of the study conducted by "Canwest Opinion" for the Cartel Electronics Inc. "Pilot Project", and a summary of Cartel's in house statistics on the system's useage for the duration of the "Pilot Project."

AN EVALUATION OF THE AGRICULTURE INFORMATION SYSTEM

PREPARED FOR CARTEL ELECTRONICS, INC.

JULY, 1988

CANWEST OPINION

MAJOR FINDINGS OF THE AGRICULTURE INFORMATION SYSTEM RESEARCH

Canwest Opinion was commissioned by Cartel Electronics Inc. to conduct an operational evaluation of the Agriculture Information System. The evaluation involved monitoring the use of the System and surveying individuals at eight different locations. In addition, a separate survey was administered to individuals who had accessed the Agriculture Information System in the past and requested further information from the Department of Agriculture. The monitoring of machine utilization and field interviewing occurred over the period June 15th to July 4th.

Summary Of Survey Findings

For the purpose of the research, two separate groups of Agriculture Information System users were interviewed. One group of users was interviewed on location after they had accessed the System. The other group represented individuals who had accessed the System and used a coupon dispensed by one of the units to request more information from the Department of Agriculture. The telephone interviewing methodology was employed to survey the group who had requested information from the Department.

- The individuals contacted by phone were asked if they had visited a Department of Agriculture office in the past year. Just under half of the respondents (45.8%) stated that they had visited an agriculture office.

- Three in ten of the individuals interviewed in person (30.0%) had accessed the Agriculture Information System on at least one occasion prior to being interviewed. All of the individuals contacted via telephone were first time users.

- Respondents were most likely to state that their initial impression of the Agriculture Information System was one of curiosity (22.3%).

- Agriculture Information System users interviewed for this research project were most likely to be younger in age (under 45 years of age), farmers, males and to reside on a farm. They were generally among the first to try new products and new ways of doing things. They also represented a large geographic area of the province (the 224 respondents represented 110 different communities).

- Generally, respondents were not aware of the number of farmers in the province nor the number of jobs resulting from the agriculture industry in Saskatchewan (only 22.3% of respondents stated that the number of farmers in the province was between sixty and seventy-five thousand; 26.8% of respondents stated that between 46% and 55% of the jobs in Saskatchewan were a result of agriculture). Respondents were also of the opinion that the public lacks knowledge about the importance of agriculture to the province (54.5%).

- Television was the medium stated most often as the major source for agricultural information (49.6%).

- Crop and chemical information were the two types of information farmers/ranchers stated they attempt to follow on a regular basis (28.8% and 26.3% respectively).

- Chemical or fertilizer information was specified by farmers as the most difficult to obtain and/or inaccurate (19.5%).

- The ag rep is the most likely source for farmers/ranchers seeking information about a farming issue or problem (49.2%).

- The Agriculture Information System was perceived to be an improvement over other sources of agriculture information (93.3%) mainly because there was a lot of information on the System and all the information was in one location (29.9% and 28.6% respectively).

- The two major reasons for accessing the Agriculture Information System were curiosity and for the weather information (43.8% and 18.8% respectively).

- The three major purposes of the Agriculture Information System were percieved as follows: to provide farmers, and the general public, with more, up-to-date and more accessible information, and to educate the general public about farming and its importance (33.9%, 31.3% and 24.1% respectively).

- The vast majority of respondents viewed the Agriculture Information System as useful, necessary and easy to operate (94.2%, 89.3%, and 96.9% respectively). The instructions were perceived to be clear, the height and size of the screen just right, and the size of print appropriate (94.2%, 85.3%, 73.2% and 88.4% respectively). The color graphics were percieved to attract people to try the System (93.3%).

- The Agriculture Information System's major benefits were its quick/convenient speed of access, the information provided and its ease of use (36.6%, 35.3% and 16.1% respectively).

- The three areas of the System viewed the most were building plans, the weather information, and the Agriculture Development Fund (25.5%, 17.0% and 12.0% respectively)

- Two out of three respondents (66.5%) were unaware that the Department of Agriculture had information on all the areas included on the Agriculture Information System.

- Nine in ten of the respondents (90.2%) printed one or more coupons while at one of the machines.

- One in three respondents (34.5%) stated that they had learnt something new from viewing the information on the System.

- The largest percentage of respondents (47.8%) stated that the information on the System was adequate.

- Opinion was split on a direct-telephone link as an alternative to sending away for the information identified on the System (42.0% perceived the phone link as a good idea; 38.8% did not). More of the respondents interviewed in person favoured a System that provided a lot of information which could be printed at the machines than a System which provided brief overviews of the areas and identified sources for more information (48.5% and 35.0% respectively). Respondents who had requested information from the Department were much more likely to state a preference for a System which provided a brief overview of the areas and identified sources for more information (70.8% compared to 20.8% who preferred a System which provided a lot of information which also could be printed).

- Respondents were more likely to state that the Agriculture Information System should be expanded to include non-agricultural information than to state that the System contain only agricultural information (62.5% and 32.6% respectively). Non-agricultural areas which could be included on the System were tourism, communiuty events, consumer information, financial services information, government services and programs, and real estate and mortgage rate information.

- Nearly nine in ten respondents (87.1%) stated that they were very or somewhat likely to use the Agriculture Information System again.

- The two main suggestions for improving the System were to advertise it and to develop a better display (26.3% and 20.1% respectively)

Major Findings: Machine Useage

During the period in which the field interviews were conducted, Canwest staff monitored the useage of the units at selected locations. The following statistics provide some insight into System useage.

Total number of System users monitored in the period June 15th to July 4th - 919

An average of 5.64 individuals accessed the Agriculture Information System per hour during the research.

Males	71.8%
Females	28.2%
Children	37.1%
Teenagers	13.2%
Adults	49.7%

The average number of individuals accessing a unit at any one time was 1.74.

Half of the individuals (49.1%) were at a unit by themselves.

The average number of individuals utilizing the machine at a time was 1.47

The average number of screen touches was 14.6 per access.

Seven in ten individuals (71.5%) printed at least one coupon while at a unit.

The average number of coupons printed per access was 1.7 (2.4 for individuals who printed a coupon)

Average machine useage was just over 4 minutes

1. Introduction

Canwest Opinion was commissioned by Cartel Electronics Inc. to undertake an operational evaluation of the Agriculture Information System. It was decided that the evaluation would comprise three components. One component would involve monitoring System utilization. A second component would involve surveying individuals accessing the System on location. The third component of the research involved interviewing individuals who had accessed the System in previous months, and as a result, requested additional information from the Department of Agriculture.

1.1 Purpose of the Research

The major purposes of the research were to determine reaction to the Agriculture Information System and its operation and to suggest possible future direction.

The intent of the research was exploratory in nature. As such, interviews were not conducted at all machine locations and the on-site survey research was limited to 200 individuals. The monitoring of the System and on-site interviews were conducted at eight locations. Four of the sites chosen were malls in the cities of Moose Jaw, Swift Current, Regina and Weyburn. The other locations were the Assiniboia Credit Union, the Bank of Nova Scotia in Moose Jaw, the Outlook Credit Union and the Farm Progress Show in Regina. In some cases for the on-site interviews, individuals were approached to try the System.

The Department of Agriculture provided copies of the coupons sent by individuals who had accessed one of the System units. Unfortunately , the Department of Agriculture did not retain all of the coupons sent in nor a lisiting of all individuals who had sent in the System coupons. Of the seventy-eight coupons provided, forty-two names were chosen for interview purposes. A total of twenty four telephone interviews were completed from this group.

1.2 Field Research

Machine useage monitoring and the "face-to-face" interviews were conducted on site between June 15th and July 4th. During this period, the telephone interviews were also completed. Up to six call backs were made to the households selected for the telephone interviewing.

In monitoring machine useage, the field staff were required to record the following information:

Date
Location
Start time of each access
Sex of the person accessing the unit
Person identification (ie. adult, teenager or child)
Number of people at the unit at the time and their identification
Number using the unit during that access

Number of screen touches
Number of coupons printed
End time of the access
Time at the machine

In order to collect information from System users two questionnaires were developed. One questionnaire was administered to previous System users via telephone while the other was administered face-to-face at the machine locations. The two questionnaires were somewhat similar in nature (see appendix "A"). The main areas addressed by the questionnaires were:

System access and reasons for same
Impressions of the System
Knowledge of the importance of agriculture
Sources of agriculture related information
Reaction to System characteristics and operation
Future direction, changes and improvements

1.3 Tabulation of Results

For the purposes of the exploratory research, the personal interview questions were cross tabulated by age, interview location, occupation, and utilization of the System (ie. first time users and repeat users). Because of the small number of interviews conducted utilizing the telephone interviewing methodolgy, the questionnaire responses were not analyzed by comparing sub-groups.

2. Analysis

What follows is a simple descriptive analysis of the findings for the questions contained on the survey questionnaires and identified useage of the System.

2.1 SURVEY RESEARCH

2.1.1 Information Received From the Department

- The individuals contacted by phone were queried about the information requested by using the coupons dispensed by the Information System. All of the respondents had received the information requested and all stated that the information was useful.

2.1.2 Agriculture Office Visits

- The individuals contacted by phone were asked if they had visited a Department of Agriculture office in the past year. Just under half of the respondents (45.8%) stated that they had visited an agriculture office; 36.4% of these individuals visisted an office one or two times; 27.3% made three or four visits; 36.4% made five or more visits. The visits were mainly to obtain information (livestock, general farm, chemical, crop, and gardening)

2.1.3 Agriculture Information System Access

- Respondents were asked if they had accessed information from the Agriculture Information System before. Overall, 73.2% of respondents were first time users. Seven in ten of the individuals interviewed personally (70.0%) and all of the individuals contacted by phone were first time users. Respondents under 45 years of age were slightly more likely than older respondents to have utilized the System previously.

- The largest percentage of respondents who stated that they had accessed the System before, did so one or two times (40.0%); 18.3% stated utilization on three or four previous occasions; 26.7% stated use of between five and ten times and 10.0% stated use of more than ten times.

2.1.4 First Impression of the Agriculture Information System

- Overall, 22.3% of respondents stated curiosity as their initial impression of the System.

- The largest percentage of individuals interviewed personally (23.0%) stated curiosity as their first impression. Other common impressions included the unit looked interesting, that the unit was some other type of machine (lottery machine, coke machine, banking machine, a game, newspaper stand or a horoscope machine), that it was neat or fun, impressive, unique, had something to do with agriculture information, a good idea, a computer, had good graphics, or that it was easy to use. A very small percentage of negative impressions (2.5%) included the machine being no big deal, that it was a waste of money, and that it was unclear how to operate the machine.

- Among the individuals contacted via phone, initial impressions were curiosity, that the System was a good idea, that it was some type of information display, interesting, impressive, had something to do with agriculture information, or was easy to operate. On the negative side, one person suggested that the machine was time consuming to operate.

2.1.5 System Users

- System users were most likely to be under 35 years of age (45.5% for both samples overall and 48.3% of repeat users). The 35 to 54 age group is the next most likely to utilize the system (40.2% overall and 40.0% of repeat users). The 55 plus age group is the least likely to try or utilize the System (14.3% overall and 11.7% of repeat users).

- System users were more likley to reside on a farm and slightly more likely to be farmers/ranchers than non-farmers/ranchers (58.5% and 52.7% respectively for both samples).

- System users were more likely to be males than females (78.6% and 21.4% for both samples).

- System users were more likely to be "early adopters" in that they are among the first to try new products and new ways of doing things rather than stick with the things they know best (61.6% and 33.9% respectively for both samples).

- The System attracts people from a lot of different communities. During the course of the research, 224 individuals were interviewed, representing110 different communities.

2.1.6 Agriculture Awareness

- Respondents were generally not aware of the number of farmers in the province nor the impact of agriculture in terms of jobs. Only 22.3% stated that the number of farmers in the province was between sixty and seveny-five thousand; 30.8% stated that the number was less than sixty thousand and 32.1% stated that the number was greater than seventy-five thousand; 14.3% stated uncertainty about the number of farmers in Saskatchewan. Greater awareness of the number of farmers in Saskatchewan was evidenced among the respondents interviewed in locations other than the malls and farmers/ranchers (note that the majority of individuals interviewed in the malls were non-farmers).

- One in four respondents (26.8%) stated that between 46 and 55% of the jobs in the province are a result of agriculture; 28.1% stated that the percentage of jobs was 45% or less and 41.5% stated the number of jobs at over 55%. Greater awareness of the number of jobs resulting from agriculture was evidenced among farmers/ranchers, individuals interviewed in the malls, and individuals aged 35 to 54.

- Just over half of the respondents (54.5%) were of the opinion that the public lacks knowledge about the importance of agriculture to the province and its residents; 44.2% of respondents stated that the public is very or somewhat knowledgeable about the importance of agriculture. Respondents most likely to state that the public lacks knowledge were farmers/ranchers and over 35 years of age.

2.1.7 Agricultural Information

- Television was the medium stated most often as the major "vehicle" for agricultural related information (49.6%); Newspapers and publications were stated as the second most utilized source (34.8%); radio and individuals were stated as the third and fourth major source by 20.1% and 18.8% respectively.

- Farmers/ranchers in both samples were asked about the types of information they follow on a regular basis. The following were the areas mentioned most often:

Crop information	28.8%
Chemical information	26.3%
Pricing information (grain, livestock, commodities)	22.9%
Livestock information	17.0%
Machinery information	14.4%
New technology and products	10.2%
Fertilizer information	8.5%
Weather	7.6%
Agriculture policies and programs	7.6%
Soils	4.2%
Financial/farm management	3.4%
Other (general farming, buildings, safety, women in agriculture, everything)	17.0%

- Farmers/ranchers in both samples were asked what types of information they find difficult to get or not as accurate as they would like. The types of information mentioned were as follows:

Chemical or fertilizer	19.5%
Pricing (futures, input, land)	9.3%
New technology and products	7.6%
Weather	5.1%
Crop varieties	5.1%
Soil research/management	4.2%
Equipment/machinery	3.4%
Government programs	3.4%
Other (management, livestock, sources)	5.9%

- Farmers/ranchers in both samples were asked what sources were utilized when seeking information about a farming issue or problem. The sources identified were as follows:

Ag rep	49.2%
Other farmers/ranchers	22.9%
Elevator agent	21.2%
Dealer/agent	10.2%
Chemical rep/agent/salesman	9.3%
Other (manufacturer, relatives, publications, agrologist, financial advisor, government)	21.2%

- Farmers/ranchers in both samples were asked how satisfied they were with the agricultural information they received. Two in three of the farmers/ranchers (66.1%) were somewhat satisfied with the information they receive; 28.0% stated that they were very satisfied with the information and 3.4% stated that they were not very satisfied.

2.1.8 Agriculture Information System Evaluation

- The System was perceived to be an improvement over other sources of agriculture information (45.5% stated that it was a big improvement and 47.8% stated that it somewhat of an improvement); 2.7% stated that the System was little or no improvement over the existing sources. Younger respondents and repeat users were the most likely to state that the System was a big improvement over traditional sources of agricultural related information.

- Respondents stating that the System is a big improvement or some improvement over other sources of agricultural information provided the following reasons:

There was a lot of information on the system	29.9%
All the agriculture information is in one location	28.6%
It was easy to use	7.1%
The information was up-to-date	3.1%
The information was detailed	2.7%
It is a good idea	2.7%
Improved access/convenience	1.8%
It is new technology	1.8%
The System is more useful	0.9%
Other (interest in information much more genuine, print information, information comes from reserach station, farmers in trouble, can't say)	4.0%

- The reasons provided by respondents stating that the System was little or no improvement over other sources of information were that it was not useful, that not a lot of information was on the System, and that the information was not very detailed(1.3%, 0.9%, and 0.5% respectively).

2.1.9 Reason For Accessing the Agriculture Information System

- The two major reasons for accessing the Agriculture Information System were curiosity and for the weather information (43.8% and 18.8% respectively). Other reasons included being asked to try the System, to occupy time while waiting for someone, to obtain specific types of information, because it looked interesting, and because a son or daughter had accessed it.

2.1.10 Purpose, Usefulness & Benefits of the Information System

- Respondents were asked what they thought was the major purpose of the Agriculture Information System. The major purposes were identified as providing farmers with more, up-to-date, more accessible information (33.9%), to provide information to the general public (31.3%), and to educate the general public (24.1%). Other purposes included testing people's response to a new way of presenting information, to help farmers, to attract people to the mall, to create jobs and to take away jobs.

- The vast majority of respondents (94.2% overall; 93.5% of respondents personally interviewed and all of the individuals interviewed via the telephone) stated that the Agriculture Information System is useful. Only 1.8% of respondents (4 individuals) from both samples stated that the System was not useful.

- The major benefits of the Agriculture Information System were perceived to be its quick, convenient, speed of access, the information provided, and its ease of use (36.6%, 35.3% and 16.1% respectively). Other benefits included current/up-to-date information, educating the general public, the ability to obtain printed information at the machine, getting a lot of information at one place, not having to depend on someone else to obtain the information, it being able to attract people, and it providing unbiased information. One person stated that the System had no benefit or advantage.

- The vast majority of respondents (89.3% overall; 88.0% of the individuals personally interviewed and all of the individuals contacted via the telephone) stated that the Agriculture Information System was necessary; 4.9% of all respondents stated that the System was not necessary. Respondents most likely to state that the System was necessary were repeat users, individuals interviewed in locations other than the malls, and farmers/ranchers.

2.1.11 Areas Viewed On The System

- Individuals interviewed personally were asked which areas they viewed on the System. The following were the areas viewed in order of mention:

Building Plans	25.5%
Weather	17.0%
Agriculture Development Fund	12.0%
Agriculture Assistance Programs	10.5%
Directory of Chemicals	7.5%
Agriculture Awareness	7.0%
Agricultural Events	7.0%
Feed and Storage	5.0%
Agricultural Sales	3.5%
Machinery Rates	3.0%
Agriculture Publications	1.5%
Crop Varieties	1.0%

- Respondents were asked if they were aware that the Department of Agriculture had information on all of the areas included on the Agriculture Information System. Two out of three of the individuals interviewed (66.5%) stated that they were not aware that the Department had information on all of the areas; 28.6% stated that they were aware that the Department had information on all the areas listed.

- Individuals who were interviewed personally were asked whether they had learnt anything new from viewing the Agriculture Information System. One in three (34.5%) stated that they had learnt something new. Respondents most likely to state that they had learnt something new were younger in age, first time users, and non-farmers/ranchers. Things the individuals learnt included the System itself, statistics about farming, the importance of farming to the Saskatchewan economy, specific livestock information, agriculture programs, the amount of agriculture information available, engineering information, where to obtain information, crop varieties, that information is easily accessed, custom rates, pest control, weather forecasts, chemicals, and job hiring.

2.1.12 Adequacy Of The Information

- The largest percentage of respondents from both samples (47.8%) were of the opinion that the information on the System was adequate; 19.2% stated that there was a need for more information on the System and 18.8% stated that there was a need for more detailed information; 14.3% were uncertain about or did not respond to the question regarding the adequacy of the information.

2.1.13 Ease Of Operation

- Nearly all respondents perceived the System to be easy to operate (96.9%). Three individuals stated that the System was difficult to operate. The reasons were that they needed more time with the System to understand how it operates and that the touch screen was very sensitive.

2.1.14 Clarity Of Instructions

- Nearly all of the respondents (94.2%) perceived the instructions on the System to be clear. Four individuals did not perceive the instructions to be clear. Their reasons were that the machine changed screens a little too fast for them to comprehend how to operate the machine, that the print size was too small and that even with the instructions, there was a lack of understanding as to how the machine operated.

2.1.15 Size And Height Of The Screen

- The vast majority of respondents stated that the size and height of the screen was just right (85.3% and 73.2% respectively); 12.5% stated that the screen was too small and 23.2% stated that it was too low.

2.1.16 Size Of Print

- The vast majority of respondents (88.4%) stated that the size of print on the screen was appropriate; 9.4% stated that the print was too small.

2.1.17 Color Graphics

- The vast majority of respondents (93.3%) stated that the color graphics do attract people to try the System.

2.1.18 Printing Of Coupons

- The vast majority of respondents interviewed personally (89.0%) printed one or more coupons while at the machine; most of these individuals printed one or two coupons (64.6%)

2.1.19 Direct-Line Telephone Hook-up

- Respondents were asked about a direct-line telephone hook-up as an alternate method of requesting information from the Department of Agriculture. Opinion was split on whether the telephone hook-up was a good idea; 42.0% thought it was a good idea while 38.8% did not; 17.4% stated uncertainty about the phone hook-up being a good idea. Respondents most likely to state that the phone hook-up was a good idea were between 35 and 54 years of age, first time users, and farmers/ranchers.

2.1.20 System Dislikes Or Areas Not Understood

- One in ten respondents identified a dislike or area not understood. The list included the screen being too sensitive, the location of the machine, not being user friendly, being too simplistic, the printer jaming, needing more time to "catch on" to the System, not understanding how the machine works, the machine attracting too many kids, the weather not being updated, not having enough information for the general public, not understanding some of the information, and the System being a waste of money.

2.1.21 Information Preferences

- Respondents were asked whether the Agriculture Information System should only provide a brief overview of a particular area and identify where more information could be obtained or provide a lot of information on a particular area which could be printed at the machine. The largest percentage of individuals interviewed personally (48.5%) stated that a lot of information should be available and be able to be printed at the machine; 35.0% stated that a brief overview and a source for more information should be provided at the machine. Respondents most likely to state that a lot of information should available at the machines were farmers/ranchers, and between 35 and 54 years of age. The individuals interviewed via the telephone had a different perception of how the System should handle the information; 70.8% stated that a brief overview and source for more information should be identified and 20.8% stated that a lot of information should be available and be able to be printed at the machine.

- Respondents were also asked whether the System should be expanded to include non-agricultural information. Just over six in ten respondents (62.5%) stated that non-agricultural information should be included on the System; 32.6% stated that the System should include only agricultural information. Respondents most likely to state that the System should be expanded to include non-agricultural information were non-farmers/ranchers, and younger in age.

- Respondents were asked for their suggestions on other types of information to be included on the System. The types of information suggested were as follows:

Tourism	9.4%
Community events	8.9%
Consumer information	7.1%
Financial related information	7.1%
Government services	4.5%
News, weather, and sports	2.7%
Job listings	2.7%
Natural and renewable resources	2.2%
Information of interest to women	2.2%
Information on specific building trades	2.2%
Agriculture related businesses and organizations	1.3%
Other (health, safety, information for children, library information, educational)	3.4%

- Respondents were also provided with a list of areas and asked whether the areas should be included on the System. The majority of respondents stated that farm machinery for sale, real estate and mortgage rate information, banking service and interest rate information, and a directory of government services and programs should be included on the System (77.2%, 67.9%, 74.1%, and 88.4% respectively). The majority (56.3%) stated that vehicle for sale information should not be on the System. There was mixed opinion on whether stock market information should be included on the System (48.2% stated that it should and 44.2% stated that it should not).

2.1.22 Future Utilization

- Respondents were asked about the likelihood of utilizing the System in the future. The majority of respondents (57.6%) stated that they would very likely use the System in the future; a further 29.5% stated that they were somewhat likely to utilize the System in the future; One in ten respondents (10.3%) stated that they were not very likely to utilize the System in the future. Farmers/ranchers, younger individuals and repeat users were the most likely to state that they would utilize the System in the future.

- The major reasons given by individuals stating that they would very likely utilize the System in the future were to obtain specific information, because the machine is interesting or fun, and to see what else is on the machine.

- The major reasons why the respondents would not use the System in the future were that the information was not useful and being from some other community (4.9% and 3.6% respectively).

2.1.23 Suggested Changes/Improvements

- Respondents were asked for their suggestions regarding changes and improvements. Two out of three respondents suggested a change or improvement. The two things mentioned most often were that there is a need to advertise the System and that a better display is required (26.3% and 20.1% respectively). Other comments included having some audio installed, having better locations, the need for more units, expanding the information to include non-agricultural areas, the need for someone to demonstrate the machine, the need for personal computer accessibility, the need for incentives like food and/or drink, making people pay for its use and a need to kid-proof the System.

2.1.24 Other Comments

- One in three respondents (30.4%) provided an additional comment at the end of the interviews. The largest percentage of respondents (11.2%) provided a positive comment about the System including the System being innovative, a good idea, beneficial/useful, easy to use, and interesting. Three respondents (1.3%) thought the System was costly or a waste of money. Other comments included having it available for personal computer hook-up, keeping the information up-to-date, expanding the System to other communities, expanding the information contained on the System, kid-proofing the System, slowing down the operation, making the screens adjustable, changing the look of the machine, and a desire not to see the ag rep replaced by a computer.

2.2 MACHINE UTILIZATION

During the period in which the field interviews were taking place, Canwest staff visually monitored the utilization of the machines at the selected locations.

2.2.1 Individuals At The Machine

- A total of 919 individuals accessed the Agriculture Information System machines during the course of the research. The visual monitoring of the units was done over 163 hours. An average of 5.64 individuals accessed the Agriculture Information System per hour during the research.

- Half of the System users were adults (49.7%); 37.1% were children and 13.2% were teenagers.

- The majority of System users were male (71.8%). Two in three adult users were male while eight in ten non-adult users were male.

- An average of 1.74 individuals utilized the machines at a time. Adults were more likely than the non-adults to be at the machines with someone else (55.4% and 43.5% respectively). In the majority of cases the adults were at the machines with one or more adults.

2.2.2 Number Of People Utilizing The System

- An average of 1.47 individuals were using the System at any one time. Non-adults approaching the machines were slightly more likely than adults to jointly access information from the System (39.8% and 33.9% respectively). In the majority of cases (63.1%), one person was utilizing the machine; in 28.6% of machine accesses, two individuals were utilizing the machine.

2.2.3 Number Of Screen Touches

- An average of 14.6 screen touches were counted per machine visit; in 40.7% of machine visits, the number of screen touches was ten or less; in 37.2% of machine visits, the number of screen touches was between eleven and twenty; in 22.1% of the visits, the number of screen touches exceeded twenty.

2.2.4 Coupons Printed

- On average, 1.7 coupons were printed per machine visit. The average among only those printing a coupon was 2.4. Non-adults were less likely than adults to print a coupon (59.7% and 83.4% respectively). However, the average number of coupons was higher among the non-adults than among the adults (3.0 and 2.0 respectively for individuals printing a coupon). The largest percentage of individuals printed one or two coupons (47.4%); 30.8% printed three or four coupons and 7.2% printed more than four coupons; 28.5% of the individuals did not print a coupon.

2.2.5 Minutes At The Machine

- The average machine visit was 4 minutes and three seconds in duration. The average machine visit was longer for adults than for children and teenagers (four minutes, fifty-six seconds and three minutes and fifty-seven seconds respectively). The largest percentage of individuals (45.7%), spent less than three minutes accessing information from the System; 22.5% of individuals spent between three and five minutes accessing the System; 16.1% spent between five and seven minutes accessing the System; 19.7% accessed the System for more than seven minutes.

3. CONCLUSIONS AND RECOMMENDATIONS

Based on an analysis of the interviews Canwest Opinion has developed a number of major conclusions about Cartel's Agriculture Information Network. In conjunction with these conclusions we have prepared a series of recommendations relating to each of these conclusions.

3.1 Community Awareness

The interviewers noted comments by a number of users from smaller communities that a community should be advised as to when a unit is placed in that community. The point being made is almost self-evident. If the objective is to encourage active use of the system, then its use should be actively encouraged. This requires more than simply placing a unit in a community and relying on word of mouth to attract users. Interview data indicates that the prime reason people accessed the machine was curiosity.

While this may be appropriate for a pilot project a larger system installation will likely require a pro-active campaign to tell a community where a unit is located. This campaign could also actively promote the use of the system, educate the community as to what the system is about, and its overall value. A promotion strategy could also serve to attract the type of users who are the target users of the system.

An example of a specific promotional campaign which was well received was Cartel taking a unit to the Farm Progress Show in Regina. Promoting an electronic agriculture information system by way of a portable system demonstrated at major farm shows, special events in smaller communities and various malls in larger centres could be an effective promotion strategy. Experience at the Farm Progress show indicates that a promotion which permit users to directly use the system has value.

It is recommended that a community promotion strategy be developed as part of any future expanded agriculture information system in order to achieve a higher frequency of use by targeted groups.

3.2 Number Of Units In The System

Interviewers found that users from a number of rural communities asked about the possibility of a Cartel unit being located in their community and whether other types of information could be included in the future. This raises an interesting point about the future of the system. How many units could be placed in Saskatchewan, how many should there be in order to achieve agricultural information goals, and would a diverse information base make the system more attractive to users over the longer term?

There appears to be a good deal of interest in the system from rural Saskatchewan as users from across the province believe that the system has value. Interview results point to the attractiveness of the agriculture information on the system, but it is important to note that a majority of users indicated they would also like to access non-agriculture types of information.

Users did not have a unanimous view on what types of information they would like to see added to the system. We believe that this issue is quite important to the longer term usefulness of the system. The more value users perceive the system as having, the more they will use it.

As a result it is recommended that there should be an integrated placement, promotion and system support plan developed to consider the issues of number of units which should be placed, where they should be placed and the feasibility of adding different types of information to complement the existing agriculture information base.

3.3 General Location Of The Units

The types of locations selected for the pilot were a mix of rural and urban sites, which resulted in a mix of users. For example, the number of children accessing a unit was substantially higher in mall locations than in a rural credit union location.

If the prime objective of the Agriculture Information Network is to target the system at farmers, then the choice of future locations should be reviewed to ensure that locations are close to where farmers currently access agriculture information. In this regard interview data revealed that when farmers/ranchers were seeking information about a farming issue or problem, their prime sources of information were the Ag Rep (49%) or the elevator agent (21%). This finding does not contradict the results of another question where respondents were asked what their major source of agriculture related information was and they identified the four main sources as television (49%), newspapers (34%), radio (20%) and individuals (18%). The difference in responses can be accounted for, in part, by the fact that rural and urban people answered this latter question, while only farmers/ranchers responded to the other aforementioned question. It can also be accounted for by the fact that the questions are fundamentally different.

Many surveys have revealed that television is the prime source of information about most topics of public interest, so it is not surprising that this survey research also found this to be the case. But among farmers/ranchers, almost none identified a form of media when seeking information about a farming issue or problem. Clearly, when a farmer/rancher is seeking informaiton on a specific issue, such as chemicals or farm buildings, they do not turn on their TV sets. Rather, they seek out someone who can servcie their need for information as they require it. Hence, their reliance on Ag Reps and elevator agents.

This is where the Cartel system has some advantages in that it is able to respond to the needs for information by farmers when and where they want it. Therefore, it is quite important that future locations of Cartel units be a function of the purpose of the system. If the purpose is to provide an information service to farmers, then consideration should be given to placing units in a variety of lcoations where it can be expected farmers will frequent, such as Ag Rep offices, elevator agents' offices, farm service centres, local credit unions, etc. If the purpose of the system is to also provide an educational function for non-farmers, then locations which attract large numbers of people, such as shopping malls and educational facilities should be considered.

3.4 Specific Location Of The Units

In Cartel's pilot test program, units were placed at various points in each location. In some cases Cartel had no choice as to where a unit could be placed. The result was that usage patterns were affected. For example, in one mall location the unit was placed by mall management next to childrens' bucking horse and helicopter rides. Data from this location indicates that machine access by children was substantially higher than in other locations. As well, comments were made to interviewers at this location that given the context of the Cartel unit (surrounded by children's toys) the first impression some users had was that the unit was a video game.

Given the importance of ensuring that prospective users have a positive first impression of a unit, it is recommended that a set of location criteria be developed by Cartel for future applications and that units not be placed in locations which do not meet these criteria.

3.5 Outside Design of Unit

Interviewers noticed that there was a noticable hesitancy on the part of many users as they approached a unit. In comments made to interviewers, users stated that they had unclear impressions as to what the unit was and what they were supposed to do with it. Some users thought the unit was a new video game, lottery machine, banking machine, etc.

It is recommended that the visual identification of the unit be re-designed. This new design should consist of some type of 'back drop' to attract a user to a unit, to permit them to instantly understand what the unit is about, and entice them to use the system. As part of this re-design, the printing on the front of the unit should be placed at the same level as the screen.

3.6 Physical Aspects Of The Unit

Comments were made by a number of users about the height of the screen being too low and its size too small. Interview data indicates that about 25% of users indicated that they did not agree that the unit height and screen size were 'just right'. While there is not enough information to determine whether this is a major obstacle to the use of a unit interviewers observed that the low screen height facilitated access by children.

It is recommended that serious consideration be given to re-designing the unit to raise the screen height. As well, two other re-designs should be implemented. First, a shelf could be incorporated just below the screen to make it difficult for little children to touch the screen. Second, as the function commands are currently located at the bottom of the screen serious consideration should be given to placing them on the top of the screen.

3.7 Presentation Of Information

The concept of the Cartel system is to deliver agriculture information to users via a user 'friendly' interactive computer data base. Interview data indicates that the company has done a good job, but some users are still experiencing difficulty. This is reflected in the number of times the 'help' command is accessed.

The use of any computer system entails learning the command structure and the time available to Cartel to 'teach' a user how to operate its command structure is probably less than 15 seconds. This is a difficult challenge given that the average machine usage time is only about 4 minutes.

While it is likely that some users will always have problems with such a system, Cartel can make some changes in the command structure which should reduce the user's "learning curve". Currently, there are inconsistencies in terms of instructions and functions on the screen (eg. colour of the instructions, positions on the screen, font and type sizes, how the function works, and how the System operates) which impedes a user quickly learning the system.

It is recommended that a detailed review of this area be conducted by Cartel and inconsistencies be eliminated before proceeding to expand the system.

3.8 Help Function

It was evident from monitoring data that many users were continually causing the "help" screen to come up. While a more consistent set of instructions should reduce the number of help accesses, there are likely several other system changes which could be made. For example, perhaps there could be a dedicated 'button' on the screen which a person could touch at any time to obtain further instructions. Perhaps a special instruction screen could be automatically presented whenever a user exceeded a certain number of unsuccessful attempts to access the system.

It is recommended that Cartel review this area of its system in detail before proceeding with an expansion program.

3.9 Direct Line Hook-up

If the objective of the system is to get detailed information from the Department out to the public, then there is a need to test the direct-line phone-up concept. Rather than a user taking a printed coupon home, then sending it to the Department, he/she could simply lif. the telephone receiver and it would automatically dial a Department number. The user could then just ask for the information. Cartel's system, as it is currently configured, can easily acommodate a telephone hook-up.

This type of application carries the risk of mis-use by people who have no real interest in securing the information. But, with the proper safeguards to minimize abuse, this add-on to the Cartel system might substantially improve its effectiveness at a relatively low cost. It is recommended that this concept be attempted at one carefully selected location.

3.10 Printed Coupons

More than 90% of users printed one or more coupons while accessing a machine. Very few of these were sent to the Department. This discrepency needs to be further investigated to determine if there is value in retaining this feature in the system and, if there is, should changes be made to provide more information in the printed format for users. Almost 50% of users interviewed on site indicated that their preference was for a system which could print more information on the spot rather than the user having to send away for more information. However, only 21% of the users who sent in a coupon had the same opinion.

If a decision was made to print more information at the machine, there will be a need to change the printer to one which can print in larger sizes and on larger paper.

Several users also commented on a system feature which should be reviewed. Currently, when a user decides to print something, only the block of information on the screen is printed. In some cases, the information is more than one screen in length, which requires the user to scroll to the next part of the screen and print that block of information. A user should be presented with print options to permit an entire area of material to be printed, rather than just what is visible on the screen.

One of the functions the printer can play is to print on a separate coupon, or on the top portion of every coupon, information which identifies the purpose of the Agriculture Information Network. By the time a user has read the coupon several days later at home he/she may have forgotten about the hows and whys of the system.

3.11 Updating

The objective of the system is to have users access the machine numerous times over a period of time. Unless information on the System is continually up-dated and the user told about same, there is no perceived need for any user to come back to it again. Therefore, there is a need to identify that the information is updated and this could be done on one of the introductory screens and/or on a "back drop".

Appendix A - Survey Questionnaires

AGRICULTURE INFORMATION SYSTEM QUESTIONNAIRE

Name _____

Phone number _____ Interviewer _____

Hello, may I please speak to _____. Hi, I'm calling on behalf of the Department of Agriculture. You had requested some information from the Department of Agriculture and I wanted to check whether you had received the information and ask you a few questions about the Agriculture Information System.

1. Did you receive the information that you had requested from the Department of Agriculture?

Yes 1
No 2

IF NO: I know that the information was sent to you. I'll make sure that another copy of the information gets sent. SKIP TO QUESTION 3

2. Did you find the information that you received to be useful?

Yes 1
No 2

IF NO: What would have made the information more useful for you?

_____

3. Have you visited a Department of Agriculture office anywhere in Saskatchewan in the last year?

Yes 1
No 2

IF YES: About how many times did you visit an Agriculture office in the last year? _____

What were the reasons why you visited an Agriculture office in the past year?

_____

4. In requesting the information from the Department of Agriculture you sent in a slip of paper from one of the Agriculture Information machines located at the _____ in _____

Was that the first time that you looked at the information available on the Agriculture Information System?

_____

Yes 1
No 2

IF NO: Approximately how many times had you looked at the information on the System?

_____

5. When you first saw the Agriculture Information System machine, what was your initial impression?

_____

_____

6. Why did you decide to see what was on the System or what caused you to try and operate the machine?

_____

_____

7. Would you say that you are generally among the first to try new products and new ways of doing things or that you generally stick with the things you know best and let others try new things first.

_____

Among first to try new products and new ways 1
Stick with things you know best 2

8. How many farmers do you think there are in the Province of Saskatchewan ...

_____

less than 45,000 1
Between 45 and 60,000 2
Between 60 and 75,000 3
Between 75 and 90,000 4
Or, more than 90,000 5

_____

Don't know 7

9. What percentage of the jobs in Saskatchewan would you say are a result of the agriculture industry ...

_____

Less than 25% 1
25 to 35% 2
35 to 45% 3
45 to 55% 4
Or, more than 55% 5

_____

Don't know 6

10. How knowledgeable do you think the general public is about the importance of agriculture to the province and its residents? Would you say the public is ...

_____

Very knowledgeable 1
Somewhat knowledgeable 2
Not very knowledgeable 3
Or, not knowledgeable at all 4

_____

Don't know 5

11. What has been your major source of information about what is happening in Agriculture ...

_____

Radio 1
Television 2
Newspapers 3
Other publications 4
Or, individuals 5

12. What is your current occupation? _____

IF HOMEMAKER/HOUSEWIVE: What is your husband's occupation?

_____

IF NOT A FARMER: SKIP TO QUESTION # 13

IF FARMER: What kinds of farm information do you try to follow or keep up with?

_____

What kinds of information with respect to farming do you find that you have difficulty getting or find is not as accurate as you would like or need it to be?

_____

_____

Where do you usually go or who do you contact when you need information about a farming issue or problem?

_____

How satisfied are you with the information you receive? Would you say you are ...

_____

Very satisfied 1
Somewhat satisfied 2
Or, not very satisfied 3

13. Compared to the sources of information now available, does it seem to you that the Agriculture Information System is ...

_____

A big improvement 1
Some improvement 2
Or, little or no improvement 3

_____

Don't know 4

Why do you say that? _____

_____

14. What do you think is the purpose of the System?

_____

_____

15. In general, do you think that the System is useful?

_____

Yes 1
No 2
Don't know 3

IF YES: Why do you think the System is useful or what do you see as the major benefit or advantage?

_____

_____

16. The objectives in developing the Agriculture Information System were to make more people aware of the information the Department has and maintains, to make people aware of the importance of Agriculture to the province, and to provide an alternate way for individuals to obtain agriculture information. In your opinion, is such a System necessary?

_____

Yes 1
No 2
Don't know 3

17. Were you aware that the Department of Agriculture had information on all the areas that were included on the Information System machine?

_____

Yes 1
No 2

18. Considering the areas you looked at on the System, is the amount of information adequate or is there a need for more information or more detailed information?

Adequate 1
Need for more information 2
Need for more detailed information 3
Don't know 4

19. From what you remember, how easy was the System to operate in terms of accessing specific information? Would you say the System was ...

Very easy to operate 1
Easy to operate 2
Difficult to operate 3
Or, very difficult to operate 4

Don't know 5

IF DIFFICULT OR VERY DIFFICULT: Why do you say the system was difficult to operate?

20. From what you remember, were the instructions on the system clear?

Yes 1
No 2
Don't recall 3

IF NO: What areas were not very clear?

21. Do you recall whether the size of the screen was ...

Too small 1
Too large 2
Or, just right 3

Don't recall 4

22. Was the screen ...

Too low 1
Too high 2
Or, at the right height 3

Don't recall 4

23. Was the size of print on the screen ...

Too small 1
Too large 2
Or, Appropriate in size 3

Don't recall 4

24. What is your impression of the color graphics on the System. Do they attract people to try the System?

Yes 1
No 2
Don't recall 3

25. An alternative to having people print the coupons and sending them in to the Department of Agriculture would be to have a phone on the System directly linked to the Department. Do you think the direct-line phone hookup is a good idea?

Yes 1
No 2
Don't know 3

26. Was there anything that you disliked or didn't understand about the Agriculture Information System?

27. Some of the information on the System is quite detailed. For other areas, individuals can retrieve the information by pressing the print command, then writing their name and address on the back of the coupon printed and sending it into the Department of Agriculture. Do you think that the System should only give a brief overview of an area and identify where more information could be obtained or should a lot of information be available that could be printed out at the machine.

Identify where more info could be obtained 1
A lot of info available and printed at machine 2
Don't know 3

28. Do you think that only agriculture information should be available on the System or that the System should be expanded to include non-agriculture information as well?

Only agriculture information 1
Expanded to include non-ag information 2
Don't know 3

IF EXPANDED TO OTHER AREAS: Do you have any suggestions as to what other types of information should be included on the System?

29. Some other types of information which could be included on the System include the following. As I read each one, tell me whether you think the information should or should not be included on the System?

	Yes	No	Don't know
Farm machinery for sale	1	2	3
Real estate listings & mortage rates	1	2	3
Stock market listings	1	2	3
Vehicles for sale	1	2	3
Banking services & interest rates	1	2	3
A directory of government services and programs	1	2	3

30. Given what you have seen on the System, how likely are you to go back and use it again? Would you say that you are ...

Very likely 1
Somewhat likely 2
Or, not very likely 3

Don't know 4

Why do you say that?

31. What changes or improvements do you think are needed to get more people to try the System?

32. Do you have any other comments about the Agriculture Information System or the information contained on it?

Now to cover some basic information so that we can classify what you have told me

33. Which of the following age grouping do you belong to ...

Under 25 1
25 - 34 2
35 - 44 3
45 - 54 4
55 - 64 5
Or, 65 plus 6

34. Is your residence located on a farm?

Yes 1
No 2

35. In which community is your residence located or which community is your residence closest to?

NOTE BUT DO NOT ASK ——— Male 1 Female 2

AGRICULTURE INFORMATION SYSTEM QUESTIONNAIRE

1. Was this the first time that you looked at the information available on the Agriculture Information System or have you used the System before?

First time 1
Used before 2

IF USED THE SYSTEM BEFORE: Approximately how many times have you looked at some of the information on the System?

2. When you first saw the System, what was your initial impression?

3. Would you say that you are generally among the first to try new products and new ways of doing things or that you generally stick with the things you know best and let others try new things first.

Among first to try new products and new ways 1
Stick with things you know best 2

4. How many farmers do you think there are in the Province of Saskatchewan —

Less than 45,000 1
Between 45 and 60,000 2
Between 60 and 75,000 3
Between 75 and 90,000 4
Or, more than 90,000 5

Don't know 7

5. What percentage of the jobs in Saskatchewan would you say are a result of the agriculture industry —

Less than 25% 1
25 to 35% 2
35 to 45% 3
45 to 55% 4
Or, more than 55% 5

Don't know 6

6. How knowledgeable do you think the general public is about the importance of agriculture to the province and its residents? Would you say the public is —

Very knowledgeable 1
Somewhat knowledgeable 2
Not very knowledgeable 3
Or, not knowledgeable at all 4

Don't know 5

7. What has been your major source of information about what is happening in Agriculture —

Radio 1
Television 2
Newspapers 3
Other publications 4
Or, individuals 5

8. What is your current occupation? _____

IF NOT A FARMER: SKIP TO QUESTION # 9

IF FARMER: What kinds of farm information do you try to follow or keep up with?

What kinds of information with respect to farming do you find that you have difficulty getting or find is not as accurate as you would like or need it to be?

Where do you usually go or who do you contact when you need information about a farming issue or problem?

How satisfied are you with the information you receive? Would you say you are —

Very satisfied 1
Somewhat satisfied 2
Or, not very satisfied 3

9. Compared to the sources of information now available, does it seem to you that the Agriculture Information System is —

A big improvement 1
Some improvement 2
Or, little or no improvement 3

Don't know 4

Why do you say that? _____

10. Why did you access the Agriculture Information System today?

11. What do you think is the purpose of the System?

12. In general, do you think that the System is useful?

Yes 1
No 2
Don't know 3

IF YES: Why do you think the System is useful or what do you see as the major benefit or advantage?

13. The objectives in developing the Agriculture Information System were to make more people aware of the information the Department has and maintains, to make people aware of the importance of Agriculture to the province, and to provide an alternate way for individuals to obtain agriculture information. In your opinion, is such a System necessary?

Yes 1
No 2

14. Which of the areas on the system did you look at today? (HAND INDIVIDUAL THE LISTING OF AREAS)

Agriculture Development Fund 01
Agriculture Assistance Programs 02
Agriculture Awareness 03
Building Plans 04
Calendar of Agriculture Events 05
Agriculture Sales & Listings 06
Feed & Storage Listings 07
Directory of Chemical Usage 08
Machinery Custom & Rental Rates 09
Grain Crop Varieties 10
Weather Information 11
Agriculture Publications & Directory 12

15. Were you aware that the Department of Agriculture had information on all of the areas on the list?

Yes 1
No 2

16. In looking at the information on the System, have you learnt something about the importance of agriculture or an area of agriculture which you did not know before?

Yes 1
No 2

IF YES: What was it that you learnt?

17. Considering the areas you looked at today on the System, is the amount of information adequate or is there a need for more information or more detailed information?

Adequate 1
Need for more information 2
Need for more detailed information 3
Don't know 4

18. Considering the areas you looked at on the System, is the amount of information adequate or is there a need for more information or more detailed information?

Adequate 1
Need for more information 2
Need for more detailed information 3
Don't know 4

19. From what you remember, how easy was the System to operate in terms of accessing specific information? Would you say the System was ...

Very easy to operate 1
Easy to operate 2
Difficult to operate 3
Or, very difficult to operate 4

Don't know 5

IF DIFFICULT OR VERY DIFFICULT: Why do you say the system was difficult to operate?

20. From what you remember, were the instructions on the system clear?

Yes 1
No 2
Don't recall 3

IF NO: What areas were not very clear?

21. Do you recall whether the size of the screen was ...

Too small 1
Too large 2
Or, just right 3

Don't recall 4

22. Was the screen ...

Too low 1
Too high 2
Or, at the right height 3

Don't recall 4

23. Was the size of print on the screen ...

Too small 1
Too large 2
Or, Appropriate in size 3

Don't recall 4

24. What is your impression of the color graphics on the System. Do they attract people to try the System?

Yes 1
No 2
Don't recall 3

25. An alternative to having people print the coupons and sending them in to the Department of Agriculture would be to have a phone on the System directly linked to the Department. Do you think the direct-line phone hookup is a good idea?

Yes 1
No 2
Don't know 3

26. Was there anything that you disliked or didn't understand about the Agriculture Information System?

27. Some of the information on the System is quite detailed. For other areas, individuals can retrieve the information by pressing the print command, then writing their name and address on the back of the coupon printed and mailing it into the Department of Agriculture. Do you think that the System should only give a brief overview of an area and identify where more information could be obtained or should a lot of information be available that could be printed out at the machine.

Identify where more info could be obtained 1
A lot of info available and printed at machine 2
Don't know 3

28. Do you think that only agriculture information should be available on the System or that the System should be expanded to include non-agriculture information as well?

Only agriculture information 1
Expanded to include non-ag information 2
Don't know 3

IF EXPANDED TO OTHER AREAS: Do you have any suggestions as to what other types of information should be included on the System?

29. Some other types of information which could be included on the System include the following: As I read each one, tell me whether you think the information should or should not be included on the System?

	Yes	No	Don't know
Farm machinery for sale	1	2	3
Real estate listings & mortage rates	1	2	3
Stock market listings	1	2	3
Vehicles for sale	1	2	3
Banking services & interest rates	1	2	3
A directory of government services and programs	1	2	3

30. Given what you have seen on the System, how likely are you to go back and use it again? Would you say that you are ...

Very likely 1
Somewhat likely 2
Or, not very likely 3

Don't know 4

Why do you say that?

31. What changes or improvements do you think are needed to get more people to try the System?

32. Do you have any other comments about the Agriculture Information System or the information contained on it?

Now to cover some basic information so that we can classify what you have told me.

33. Which of the following age grouping do you belong to ...

Under 25 1
25 - 34 2
35 - 44 3
45 - 54 4
55 - 64 5
Or, 65 plus 6

34. Is your residence located on a farm?

Yes 1
No 2

35. In which community is your residence located or which community is your residence closest to?

DON'T BUT DO NOT ASK ——— Male 1 Female 2

C. During the pilot project and subsequent evaluation and analysis some very significant findings point to key areas where Department personnel may enhance their services.

Two out of three respondents in our survey were unaware that the Department of Agriculture had information on all the areas exposed on the Agriculture Information Network. This would indicate the network could become a very useful tool to the Department in exposing its expansive information database. Most respondents viewed the system as useful, convenient, and easy to use. This would indicate it could provide a useful service particularly at remote locations where farmers would normally have to travel some distance to acquire similiar information. Statistical observations which may be of interest to Department personnel were organized into the following executive summary of the study. This allows the reader to quickly analyze the findings and from his own perspective interpret how the findings would impact his area of responsibility.

C. (Cont'd)

Upon reviewing the findings of the study, Cartel feels that the Agriculture Information System Cartel has developed would fit well into the thrust currently being undertaken by Saskatchewan Rural Development with their intended set up of (52) Rural Service Centers. Some study has been undertaken by the company to assess what its role could be in assisting Rural Development in its objectives, one of which is "to develop the best possible co-ordination and utilization of resources to provide an innovative, world class information delivery system to rural residents." And Cartel management is of the opinion that further exposure of Agriculture Information in communities not serviced by the Rural Service Centers could be achieved through the installation of Cartel's interactive information system, which would be a natural extension of the Rural Service Centers.

Cartel could play a vital role in assisting Saskatchewan Rural Development, and management feels that further condiseration to that end is warranted.

CARTEL ELECTRONICS INC. - AG. INFO. SYSTEM

F. PERSONNEL INVOLVED IN PROJECT

PERSONNEL	JOB DESCRIPTION	% TIME ON PROJECT
James Collie	Software Programming	100%
Rod Wuetherick	Software Programming	100%
Tom Hermansen	Software Programming	10%
Doug Mintenko	Project Manager	100%
Arlen Avery	Marketing	100%
Donna Morhart	Graphics Creation	40%
Andy Tane	Hardware Technician	10%
Vi Avery	Date Entry/Graphics	75%
Teresa Mintenko	Data Entry	50%
Rod Smith	Site Preparation	50%
Kerry Avery	Maintenance	50%

The A.D.F. enhancement project undertaken began with its primary focus an effort to stimulate industry interest in expanding this technology by further trade shows and industry exposure. Almost immediately after a mail out to industry and exposure at Moose Jaw's Agriculture Fair where invitations to view were well attended - interest began to be expressed in serious negotiations. As a result some deviation from original plans were made as previously indicated, to accommodate the interest expressed. Trips were taken to Ti Sask. in Saskatoon and D.E.L. Compu-Cable Systems in Saskatoon for formal presentations.
With the plans and funding coming together to expand the technology through a merger with D.E.L. Compu-Cable and Grassroots Inc. from Winnipeg. With the intent of utilizing either Rural Service Centres or Rural Municipality offices attempts to "target" our exposures were made to explore the interest by those involved.

Fifteen rural shows were structured at various locations throughout the province to allow the Rural Municipality personnel an opportunity to examine the technology. In addition a mail-out information package and brief questionnaire was sent to all R. M. offices. The results and samples are attached.

Rural Services personnel were exposed to the technology at the A.D.F. conference and a brief proposal was sent to Rural Services. Municipalities were definitely more interested than

Rural Service Centres and as such, we will be concentrating on an expansion utilizing the co-operation of the R. M. offices. Saskatchewan Crop Insurance has also expressed a definite interest in the electronic data base exposure via Grassroots technology and this will assist in providing core funding for the new company, Display Systems International, if we are successful in our proposal now before

Harvey Rothecker,
Head office,
Sask Crop Insurance,
Melville, Saskatchewan

We are pleased to report that agreements have been reached and contracts are being drawn to provide substantial (in excess of 300,000) support for the expansion of this technology in concert with the compatible technologies developed by Grassroots and D.E.L. Compu-cable Systems. In addition, the Western Development Museums have decided to utilize all the research equipment and programm development for use as interactive displays. This of course, with the exception of the equipment to be utilized by A.D.F. for trade show displays.

As a result, this project must be considered 100% successful. It has through its research and development created a new Saskatchewan company, with substantial private funding, concentrating on expanding Agriculture information via electronic media. It has exposed the industry and public to the benefits of electronic distribution which should allow further expansion to

be quickly achieved and finally it has utilized all research equipment as support tools for government agencies.

The approach taken was to present to rural Saskatchewan users and potential industry participants, the technology and its opportunities related to electronic data creation and transfer. To this end 19+ shows and or demonstrations were arranged and attended in our marketing efforts. (See list attached) All Rural Municipalities received a descriptive package and questionnaire as well as an invitation to attend one of our rural show locations. Copies of questioner replies received are attached for your review. Numerous calls to various private sector companies have resulted in a list of companies interested in participating when the expanded network is a reality.

The results of these efforts speak for themselves. Overwhelming positive support from the Rural municipality offices and a funded working arrangement to expand the opportunity in Saskatchewan with the creation of Display Systems International, a newly formed corporation composed of support and technology from two Saskatchewan firms, and one Manitoba firm.

In our examination of these technologies long term opportunity in rural Saskatchewan, we would anticipate that over the short term, hard work will be required to convince private sector advertisers to support the placement of electronic data information over the system. Interactive terminals strategically placed to gain the

exposure necessary to justify display costs would be a definite asset. If this can be accomplished, the resulting long term expansion in interesting electronic data will create added interest in home computer users and increased subscriptions for the newly formed Display Systems International. The eventual result of the success of an electronic information system in rural Saskatchewan is increased efficiency for our farmers.

WHERE DO WE GO FROM HERE?

This project was undertaken to assist in resolving the problem experienced by any new technology - that of exposure particularly targeted to user groups that form the defined entry point of the new technology into the marketplace.

The electronic transfer of data base information to rural Saskatchewan will in the future become commonplace. Because of advances in computer and communications technology such as Cartel's interactive display modules, whole libraries of information can be provided to rural residents at remote provincial areas. Exposure of this technology was necessary however, to create an awareness among users and potential user groups to its exitance and stage of development.

The principal objectives of this project were to create this awareness through exposure and specifically to encourage others interested in this technology to invest in further expansion opportunities.

Over the next several months various government departments, agencies and organizations will be approached by Display Systems International to participate in remarketing their electronic data information over the developing network. A positive response has been received already with Saskatchewan Crop Insurance seriously entertaining a proposal from Display Systems International. Other agencies which have already been exposed to the concept and may be interested in participating in an expanded system include Ti Sask, Tourism, and Buy Saskatchewan, Credit Union, Saskatchewan Wheat Pool and The Craft Marketing Centre.

The "E" mail potential of this system may in the future provide rapid inexpensive personal communications similar to "Fax" machines for farmers as well as small businesses. The implications for efficient use of existing equipment and products is obvious.

Farmer to farmer listings of seed, forage, equipment etc. will be inexpensive and available 24 hours a day. Electronic purchasing will provide competitive benefits to farmers so equipped. In addition, the promotion of the system will mean more and more

farmers will become computer users and utilize the computer to better analyze their own operation, improve their efficiency and accounting procedures, hedge their grain sales and overall improve the competitive position of Saskatchewan Agriculture. Information is definitely a tool to be utilized and the increased exposure to research data, new farming methods, at the rural farmhouse, etc. will educate existing and future farm families.

All those producers and extension personnel who feel that advanced electronic distribution of information may have some utility for themselves are encouraged to call

Display Systems International (306) 692-6662

We would be pleased to send a representative to explore potential uses and provide any further information that may be required.

Since this was more a marketing project than a research based project no publications or research papers have been written or prepared. We have included copies of the responses received from various R.M.s and town as well as letters of agreement with respective joint venture partners investing in the new company.

CARTEL
ELECTRONICS, INC.

In addition to the Rural Municipality displays (see list attached), the following demonstrations were made to interested participants over the term of the project.

April 21/23	Farm Home & Leisure Show, Moose Jaw, Sask.
May	Credit Union Central, Regina, Sask.
June	D.E.L. Compu-Cable Systems, Saskatoon, Sask.
June	Westbridge Computer Systems, Regina, Sask.
August	Ti Sask, Saskatoon, Sask.
October	Agriculture Development Fund Conference, Regina, Sask.
November	Grassroots in concert with Agribition, Regina, Sask.
January/90	Smail Communications, Saskatoon, Sask.

All of the demonstrations involved the transport set up and display of the Cartel display modules and Cartel technology.

MOOSE JAW	JANUARY 8, 1990	HARWOOD HOTEL	1-693-2366
ASSINIBOIA	JANUARY 9, 1990	ASSINIBOIA LODGE	1-642-3386
REGINA	JANUARY 10, 1990	TRAVELODGE	1-586-3443
WEYBURN	JANUARY 11, 1990	WEYBURN INN	1-842-6543
ESTEVAN	JANUARY 12, 1990	BEEFEATER INNN	1-634-6456
YORKTON	JANUARY 14, 1990	IMPERIAL 400	1-783-6581
HUMBOLT	JANUARY 15, 1990	BALAVISTA INN	1-800-667-0790
SASKATOON	JANUARY 16, 1990	IMPERIAL 400	1-244-2901
PRINCE ALBERT	JANUARY 17, 1990	IMPERIAL 400	1-764-6881
NORTH BATTLEFORD	JANUARY 18, 1990	BEAVER BROOK LODGE	1-445-7747
DAVIDSON	JANUARY 22, 1990	DAVIDSON HOTEL	1-567-3131
MAPLE CREEK	JANUARY 23, 1990	FOUR SEASONS	1-662-4477
KINDERSLY	JANUARY 24, 1990	KINDERSLY INN	1-463-6555
SWIFT CURRENT	JANUARY 25, 1990	IMPERIAL 400	1-773-2033

SASKATCHEWAN AGRICULTURE INFORMATION SYSTEMS

Cartel Electronics Inc.'s pilot project for an Agriculture Information System funded by the Agriculture Development Fund has demonstrated itself to be a viable means of delivering agriculture information to Saskatchewan farmers and a means of educating Saskatchewan residents of the importance of agriculture in this province. It has proven itself to be an acceptable and easy way to access information as indicated by a study recently conducted by "Canwest Opinion" of Regina. (Canwest opinion is an independent consulting group which has previously worked with Saskatchewan Department of Agriculture on several projects.)

Interest in the project has been expressed by private sector agriculture suppliers and service companies. And, provided adequate exposure to the Saskatchewan farm community exists, the agriculture private sector companies will pay to expose their products and services via this media.

Due to the findings of the study and the keen interest expressed by the private sector, Cartel feels that an expansion of the system throughout rural Saskatchewan may be warranted.

In response to the findings of the study and the interest expressed by several Saskatchewan communities in having a Cartel information system in their town or village. Cartel is attempting to isolate the most effective locations to maximize information distribution.